



UPC 013

October 27, 1978

To: Alvin Tollestrup
From: S. Ohnuma

Center Coordinates from DC and AC Data

All center coordinates have been calculated in accordance with the agreement we have made. That is, use b_8 and a_8 (18-pole), and b_7 and a_7 (16-pole) to make the new value of b_7 and a_7 equal to zero. Of fourteen magnets available for the comparison, six cases are not consistent and harmonic coefficients are quite different depending on which set of coordinates are used.

I am enclosing three tables for you to compare:

1. DCHØ.DAT regular DC data
2. ACH.DAT AC data with the center coordinates from DC data at 4,000A (or the highest current).
3. ACHS.DAT AC data with the center coordinates from AC data at 4,000A (or the highest current).

All magnets, except for PBALL8, are for the center field only.

cc: Frank Cole
D. Gross
H. Edwards

magnet	HORIZONTAL (in mil)								VERTICAL (in mil)															
	500A				1000A				4000A				500A				1000A				4000A			
	AC	DC		AC	DC		AC	DC		AC	DC		AC	DC		AC	DC		AC	DC		AC	DC	
118 E. D.	-5	-3		-8	-8		-13	-12		68	67		67	66		67	65		67	66		67	65	
E. U.	-39	-31		-30	-27		-23	-23		42	52		39	43		37	38		46	45		45	44	
C.	38	38		40	38		43	39		47	51		46	45		45	44		46	45		44	40	
*119 C.	9	7		-6	9		-17	11		56	53		63	55		71	57		71	55		71	57	
*120 C.	34	29		30	28		26	27		94	93		98	95		100	97		100	95		100	97	
98 C.	20	25		25	25		30	26		8	12		17	17		18	18		24	23		24	23	
95 C.	1	1		0	0		0	-1		94	98		101	101		106	104		106	104		106	104	
*115 C.	66	19		72	19		73	20		177	98		184	100		186	102		186	102		186	102	
*130 C.	25	25		26	27		28	28		104	105		109	107		107	107		107	107		107	107	
124 C.	64	57		54	52		47	47		36	35		42	39		46	43		46	43		46	43	
123 C.	24	25		22	23		19	21		96	100		98	99		102	99		102	99		102	99	
117 C.	47	48		50	49		52	49		37	29		42	35		47	40		47	40		47	40	
*131 C.	-30	+31		-33	+30		-33	+31		87	84		91	85		91	86		91	86		91	86	
* 80 C.	62	54		53	47		45	42		133	102		118	96		103	88		103	88		103	88	
*127 C.	-3	-3		2	1		5	5		76	59		80	66		82	71		82	71		82	71	
*116 C.	-77	-10		-57	-1		-34	+7		70	12		77	16		75	19		75	19		75	19	

E. D. = downstream end, E. U. = upstream end, C. = center

* = bad case